AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (currently amended) A method for powering up an optical network, comprising the steps of:

(a) selecting an optical link between a transmitter and a receiver in the optical network, the optical link being divided into a number of sections by monitoring points located between the transmitter and the receiver;

(b) selecting a first section of the optical link nearest to the transmitter in the optical network;

(c) gradually increasing optical power of an optical signal provided to the selected section of the optical link from the transmitter, including setting attenuation of attenuators on the optical link to substantially maximum attenuation and gradually decreasing the attenuation of the attenuators until the optical signal ~~at a minimal detectable level~~ ~~at a minimal detectable level~~ is detected at the monitoring point belonging to the selected section;

the step (c) comprising detecting the optical signal at the monitoring point by detecting a dither tone modulated onto the optical signal to uniquely identify the optical signal;

(d) verifying if the detected optical signal at the minimal detectable level is being detected at a correct location according to a network specification and if the power of the detected optical signal is at the expected level according to the network specification;

(e) selecting a next section of the optical link adjacent to the previously selected section and further away from the transmitter in the optical network; and

(f) repeating the steps (c) to (e) until all sections in the optical link have been selected.

2. (original) A method as described in claim 1, wherein the step (a) of selecting an optical link comprises selecting an optical link that has one section and one first monitoring point located at the receiver.

3. (original) A method as described in claim 1, wherein the step (c) of gradually increasing the optical power comprises increasing the optical power continuously.

4. (canceled)

5. (original) A method as described in claim 1, further comprising the step of setting attenuation of attenuators and gain settings of amplifiers in the selected section, the step being performed after the step (d) of verifying.

6. (original) A method as described in claim 5, wherein the step (c) of gradually increasing optical power comprises increasing the optical power in steps provided by sets of precalculated link budgets.

7. (original) A method as described in claim 1, wherein the step (c) of gradually increasing optical power comprises detecting the optical signal at the monitoring point by detecting a dither tone modulated onto the signal.

8. (currently amended) A method as described in claim 1, further comprising the step of reconnecting the selected section of the optical link according to the network specification, if the step (d) of verifying gives the results that the detected dither tone ~~optical signal~~ is not being detected at the correct location, the step of reconnecting further comprising setting attenuation of the attenuators to substantially maximum attenuation.

9. (original) A method as described in claim 1, the method being performed on a pre-existing optical network so that pre-existing signals on the network are not being disturbed.

10. (original) A method as described in claim 9, the method being performed such that pre-existing amplifier gain settings are not being changed.

11. (original) A method as described in claim 1, the method being performed on the link in the optical network remotely.

12. (currently amended) A system for powering up an optical network, comprising:

(a) means for selecting an optical link between a transmitter and a receiver in the optical network, the optical link being divided into a number of sections by monitoring points located between the transmitter and the receiver;

(b) means for selecting a first section of the optical link nearest to the transmitter in the optical network;

(c) means for gradually increasing optical power of an optical signal provided to the selected section of the optical link from the transmitter, including setting attenuation of attenuators on the optical link to substantially maximum attenuation and gradually decreasing the attenuation of the attenuators until the optical signal ~~at a minimal detectable level~~ is detected at the monitoring point belonging to the selected section~~;~~, and detecting the optical signal at the monitoring point by detecting a dither tone modulated onto the optical signal to uniquely identify the optical signal;

(d) means for verifying if the detected optical signal at the minimal detectable level is being detected at a correct location according to a network specification and if the power of the detected optical signal is at the expected level according to the network specification;

(e) means for selecting a next section of the optical link adjacent to the previously selected section and further away from the transmitter in the optical network; and

(f) means for repeating the steps (c) to (e) until all sections in the optical link have been selected.

13. (original) A system as described in claim 12, wherein the means (c) for gradually increasing optical power comprises means for gradually increasing the optical power in steps provided by sets of precalculated link budgets.